Concordance of survival in family members with prostate cancer.

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Abstract

PURPOSE: Several earlier studies have assessed survival in prostate cancer based on familial risk of this disease. As a novel concept, we posit that factors governing survival in prostate cancer are likely to be different from those governing risk of prostate cancer. To prove this, we searched for familial clustering of survival (ie, concordance of survival among family members).

PATIENTS AND METHODS: We used the nationwide Swedish Family-Cancer Database to estimate hazard rates (HRs) for cause-specific and overall survival in invasive prostate cancer. HRs show the probability of death in the study group compared with the reference group. The study covered 610 sons of affected fathers with median follow-up times for survival ranging from 34 to 76 months.

RESULTS: When the survival in sons was analyzed according to the fathers' length of survival, there was a concordance of prognosis; the HR was 0.62 for sons whose fathers had survived longer than 59 months, compared with sons whose fathers had survived fewer than 24 months (P for trend, .02). On a continuous scale, the sons' survival increased almost linearly with the fathers' survival time. When the analysis was reversed and HRs were derived for fathers, the concordance of good and poor survival remained.

CONCLUSION: The results are consistent in showing that both good and poor survival in prostate cancer aggregate in families. Genetic factors are likely to contribute to the results, which provide the first challenging population-level evidence on heritability in prognosis of prostate cancer.

PMID: 18375899 [PubMed - indexed for MEDLINE]